REMARKS

These remarks are set forth in response to the office action mailed May 8, 2003 (the "Office Action"). As this amendment has been timely filed within the three-month statutory period, neither an extension of time nor a fee is required. Claims 1 through 17, as amended, and new claims 18 through 23 are presently pending in the Patent Application. In the Office Action, claims 1 and 8 have been rejected under 35 U.S.C. §112, second paragraph. Claims 1-5, 7-12 and 14-17 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,091,954 to Haartsen et al. (hereinafter "Haartsen") in view of U.S. Patent No. 5,970,410 to Carney et al. (hereinafter "Carney").

In response to the Examiner's rejection of claims 1 and 8 under 35 U.S.C. §112, second paragraph, Applicant has now amended those claims to provide proper antecedent basis. Specifically, in claims 1 and 8, line 5 has been corrected to now recite "each of said available CP resources" to provide consistency with the recitation of this element as it appears earlier in the claims.

Before discussing the Examiner's rejection on art, a brief review of Applicant's invention is appropriate. Applicant's invention is directed to the architecture of the base station and the way in which that architecture can be used to promote more efficient use of signal processing resources. Typical narrowband base station architectures implement the DSP processing capabilities within the same physical unit as the up and down conversion between baseband and RF. The DSP resources are fixed to support only the one frequency assigned to the transceiver unit.

In contrast, the DSP processing resources used to implement the baseband physical layer processing of the RF carriers in Applicant's invention are dynamically assignable to the baseband-to-RF frequency upconversion and RF frequency-to-baseband downconversion of the broadband RF transceiver. The broadband RF transceiver implements the upconversion and downconversion function and will support this capability for multiple RF frequencies. Thus, the DSP processing resources may be assigned to perform the baseband RF processing for any frequency channel and may be dynamically assigned.

Turning now to the Examiner's rejections on art, it is noted that claims 1-5, 7-12 and 14-17 are rejected 35 U.S.C. §103(a) as being unpatentable over Haartsen in view of Carney. Haartsen describes a method of assigning different groups of narrowband transceivers for handling different types of mobile transceiver units having respectively different operating characteristics. In a cellular network, one group of transceivers is assigned frequencies implementing a higher density frequency reuse across the network. A second group of transceivers is assigned for operation on a separate group of frequencies on which a lower density frequency reuse plan is implemented.. Calls assigned to the transceiver group with a higher density reuse plan would be susceptible to higher levels of interference is a loaded network than lower density group.

Each mobile unit in Haartsen is assigned to either the higher density reuse or the lower density reuse group, depending upon its capabilities. An "enhanced" mobile supports capabilities that allow it to operate in an environment that has a higher level of interference. A mobile determined by the network to possess these interference mitigation capabilies would be assigned to a group utilizing the higher density frequency reuse plan. The enhanced mobile can mitigate this interference by capabilities such as receiver diversity and interference cancellation

techniques incorporated into the mobile. Non-enhanced mobiles would be assigned to the lower density frequency reuse group.

In addition to the assignment of equipment to a particular frequency reuse group, another aspect of the Haartsen invention is the assignment of mobile units to a particular base station in the network. This assignment is determined by the minimum link quality required for the mobile and the need to find a channel on a base station capable of meeting that minimum link quality.

From the foregoing, it is apparent that Haartsen fails to disclose a key feature of Applicant's invention as recited in the claims 1 and 8. Specifically, Haartsen does not fairly show or suggest that the DSP processing resources may be assigned to perform the baseband RF processing for any frequency channel of a broadband transceiver. Moreover, Haartsen does not show or suggest that such assignment can occur dynamically to accommodate the varying demands that may be placed upon the base station equipment. These features are not disclosed in Haartsen and are certainly not required to implement Haartsen.

Notwithstanding the deficiencies of Haartsen, the Examiner asserts that claims 1-5, 7-12 and 14-17 would be obvious based on the combination of Haartsen and Carney. Carney discloses a cellular system architecture whereby high efficiency broadband transceivers can be deployed in a cost-efficient manner. In particular, Carney discloses an architecture for a wireless communication system in which the cells are grouped into clusters and the available frequency spectrum is divided into frequency reuse groups. A home cell location is identified within each cluster and a base station located at or near the home cell site serves the multiple cells in the reuse cluster. Rather than deploy a complete suite of base station equipment at each of the cells in the cluster, translator units are located in the outlying cells serviced by the home base station in which low traffic density is expected. The translators are connected to directional antennas

arranged to point back to the home base station site. The translators are deployed in such a way which meshes with the eventually intended frequency reuse for the entire cluster of cells.

Notably absent from Carney is any teaching or suggestion of a base station arranged and/or operated in the manner recited in Applicant's claims 1 and 8. Specifically, Carney is devoid of any teaching for dynamically allocating signal processing resources in a wireless multichannel broadband base station (BBS). Carney does not disclose or suggest allocating a plurality of pooled available channel processor (CP) resources which are unused in the BBS and, in response to notification of a call originating from or to a subscriber in a cell supported by the BBS, assigning any of the available CP resources for processing of the call.

In contrast, Applicant's invention allows processing resources to be dynamically allocated to any transceiver associated with a broadband base station. In effect this allows the processing resources to be dynamically allocated to any area covered by the transceiver in any cell supported by the base station. This ability to freely assign processing resources to any transceiver or cell supported by the base station improves the trunking efficiency by allowing more subscribers to be supported using fewer resources. Accordingly, claims 1-17 are believed to be allowable over the references cited by the Examiner.

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Claims 18-23 provide alternative recitations of the Applicant's invention. These claims are also believed to be patentable over the prior art of record for the reasons set forth above. Accordingly, this entire application is believed to be in condition for allowance. Consequently, such action is respectfully requested. The Applicants request that the Examiner call the undersigned if clarification is needed on any matter within this Amendment, or if the Examiner believes a telephone interview would expedite the prosecution of the subject application to completion.

Respectfully submitted,

Date: 8/8/03

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